PROTECT YOURSELF FROM THE “SUPERBUG” (MRSA)

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Over the last month there have been several reports of a “superbug” named methicillin-resistant *Staphylococcus aureus* (MRSA) emerging. Sadly, a Virginia teen died from complications related to a MRSA infection. This article serves to answer many questions about MRSA and provides information to help protect you and your family.

What is *Staphylococcus aureus* (staph)?

Staphylococcus aureus, often referred to simply as "staph," are bacteria commonly carried on the skin or in the nose of healthy people. Under the right conditions staph can cause an infection. Staph bacteria are one of the most common causes of skin infections in the United States. Variants of *Streptococcus* represent the other common cause of bacterial skin infections. Most of these skin infections are minor and can be treated without antibiotics.

What is MRSA (methicillin-resistant *Staphylococcus aureus*)?

MRSA is among a number of emerging bacteria that usual antibiotics just cannot tackle anymore. Why? Because certain strains of bacteria, sometimes called "super bugs," have built up a resistance — or immunity — to often-used antibiotics. For years, the medical community has worried that the rampant overuse and misuse of antibiotics, especially in kids, could give rise to this kind of drug-resistant bacteria — a good reason for doctors and parents to avoid using antibiotics for children's common colds or viral infections.

Some staph bacteria are now resistant to antibiotics. MRSA is a type of staph that is resistant to certain antibiotics; namely, the family of penicillins. (a common one tested for is methicillin, and if the staph is resistant, it is called MRSA) While 25% to 30% of the population is colonized with staph, approximately 1% is colonized with MRSA.

Although MRSA is making headlines, it is not a new infection — the first case was reported in 1968. The difference is that now, MRSA is affecting more people outside of hospitals. MRSA used to be seen only in those with weakened immune systems — chronically ill people who would have been hospitalized for a long time or had surgery, those receiving long courses of antibiotic therapy, or people living in long-term care facilities like nursing homes or prisons. But now a growing number of otherwise healthy people who are not considered at risk for MRSA are getting the infection. Often called **community-associated MRSA** (**CA-MRSA**), this type of staph infection can be passed to others through shared equipment or direct skin-to-skin contact. The CA-MRSA is a distinct entity compared with the hospital associated MRSA.

CA-MRSA in the community are usually manifested as skin infections, and appear as pustules or boils which often are red, swollen, painful, or have pus or other drainage. These skin infections commonly occur when the germ enters the body at sites of visible skin trauma, such as cuts and abrasions, and areas of the body covered by hair (e.g., back of neck, groin, buttock, armpit, beard area on men). Many people mistakenly think they have a spider or insect bite.

In what settings do MRSA skin infections occur?

- MRSA skin infections can occur anywhere.
- Some settings have factors that make it easier for MRSA to be transmitted:
  - These factors, referred to as the 5 **C**'s, are as follows: **C**rowding, frequent skin-to-skin **C**ontact, **C**ompromised skin (i.e., cuts or abrasions), **C**ontaminated items and surfaces, and lack of **C**leanliness.
  - Locations where the 5 C's are common include schools, dormitories, military barracks, households, correctional facilities, and daycare centers.

Can I get MRSA infection at the Fitness Center?

In the outbreaks of MRSA, the environment has not played a significant role in the transmission. MRSA is transmitted most frequently by direct skin-to-skin contact. You can protect yourself from infections by following the advice listed in this article. For additional protection, use proper etiquette when you are at the Fitness Center by wiping the surfaces of equipment before and after each use (cleaning materials are available on site).

Please note that the Fitness Center, Barber Shop and Child Developmental Center are regularly inspected by Environmental Health Division of Barquist Health Facility. *All entities are in compliance and have been briefed on continued vigilance to prevent the spread of CA-MRSA.*

Are staph and MRSA infections treatable?

Almost all MRSA skin infections can be effectively treated by drainage of pus with or without antibiotics. More serious infections, such as pneumonia, bloodstream infections, or bone infections, are very rare in healthy people who get MRSA skin infections.

If the infection is not getting better after a few days, return to your health care provider. If other people you know or live with get the same infection tell them to go to their healthcare provider.

How do I protect myself from getting MRSA?

- practice good hygiene (e.g., keeping your hands clean by washing with soap and water or using an alcohol-based hand sanitizer and showering immediately after participating in exercise);
- cover skin trauma such as abrasions or cuts with a clean dry bandage until healed;
- avoid sharing personal items (e.g., towels, razors) that come into contact with your bare skin; and using a barrier (e.g., clothing or a towel) between your skin and shared equipment such as weight-training benches;
- maintain a clean environment by establishing cleaning procedures for frequently touched surfaces and surfaces that come into direct contact with people's skin.

Should schools close because of an MRSA infection?

The decision to close a school for any communicable disease should be made by school officials in consultation with local and/or state public health officials. However, in most cases, it is not necessary to close schools because of an MRSA infection in a student. It is important to note that MRSA transmission can be prevented by simple measures such as hand hygiene and covering infections.

Should the school be closed to be cleaned or disinfected when an MRSA infection occurs?

In general it is not necessary to close schools to "disinfect" them when MRSA infections occur. MRSA skin infections are transmitted primarily by skin-to-skin contact and contact with surfaces that have come into contact with someone else's infection. When MRSA skin infections occur, cleaning and disinfection should be performed on surfaces that are likely to contact uncovered or poorly covered infections. *Covering infections with gauze or bandages will greatly reduce the risks of surfaces becoming contaminated with MRSA.*

Should the entire school community be notified of every MRSA infection?

Usually, it should not be necessary to inform the entire school community about a single MRSA infection. When an MRSA infection occurs within the school population, the school nurse and school physician should determine, based on their medical judgment, whether some or all students, parents and staff should be notified. Consultation with the local public health authorities should be used to guide this decision.

Remember that staphylococcus (staph) bacteria, including MRSA, have been and remain a common cause of skin infections. (Of note, only invasive MRSA infections- blood stream, pneumonias etc-those requiring hospitalizations- are reportable)

Should the school be notified that my child has an MRSA infection?

Consult with your school about its policy for notification of skin infections. Although it is generally a good idea to keep your school nurse informed of all health problems.

Should students with MRSA skin infections be excluded from attending school?

Unless directed by a physician, students with MRSA infections should not be excluded from attending school.

Exclusion from school and sports activities should be reserved for those with wound drainage ("pus") that cannot be covered and contained with a clean, dry bandage and for those who cannot maintain good personal hygiene.

Additional information may be obtained from the following websites:

Podcasts http://www2a.cdc.gov/podcasts/player.asp?f=6936

http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_public.html#4

http://www.kidshealth.org/PageManager.jsp?dn=familydoctor&lic=44&cat_id=5&article_set=54708

http://usachppm.apgea.army.mil/Documents/FACT/36-013-0107-Staphylococcus_aureus.pdf

http://www.cdc.gov/Features/MRSAinSchools/